LISTING OF THE CLAIMS:

This listing of the claims replaces all prior versions, and listings, of claims in the application. Please amend claims 6 and 8.

1. (previously presented) A system for indicating the location of an energy zone on an object surface, with the energy zone being an area on the object surface that is imaged onto an IR detector by the IR optical system included in a non-contact IR thermal measurement device, said system comprising:

a video sub-system for displaying a displayed image of at least a part of the object surface not included in the energy zone and of at least a part of the object surface included in the energy zone;

a range-finding sub-system for measuring the distance between the non-contact IR thermal measurement device and the object surface and outputting a distance signal indicating a measured distance; and

an optical overlay sub-system, coupled to the range-finding sub-system, for overlaying a shape outline, having a dimension determined by a received measured distance, over the displayed image of the object surface and with the shape outline indicating the extent of a displayed image included in the energy zone.

2. (original) The system of claim 1 where the range-finding sub-system comprises:

a laser diode for emitting a laser-beam along a first optical axis;

a position-sensitive photodiode, having a major surface and displaced from the first optical axis, for receiving a portion of the laser beam reflected from the object surface and indicating the position of a reflected portion on the major surface.

3. (original) The system of claim 2 where the first axis is substantially coincident with the optical axis of the IR optical system so that the laser beam indicates the center of the energy zone.

4. (original) The system of claim 1 where the video-subsystem comprises:

a digital image generating chip for outputting digital image data, a display device for displaying digital image data, and an image controller chip for controlling the display device to display digital image data provided by the image generating chip;

and where the optical overlay subsystem includes:

a storage device for storing circle data utilized to form circle images of different diameters;

and with the image controller coupled to the storage device and the range-finding sub-system, programmed to select circle data from the storage device for generating a circle having a diameter size determined by the measured distance provided by the range-finding sub-system.

5. (original) The system of claim 1 where the shape outline is a circle.

6. (currently amended) A method for indicating the location of an energy zone on an object surface, with the energy zone being an area on the object surface that is imaged onto an IR detector by the IR optical system included in a non-contact IR thermal measurement device, said method comprising steps of:

acquiring a digital image of the object surface;

displaying a digital image of the object, with the digital image including a part of the object surface not included in the energy zone;

measuring the distance to the object surface to obtain a distance value;

forming a geometrical shape indicating the portion of the object surface indicating the portion of the object surface included in the energy zone <u>with a dimension of the geometrical shape determined by the distance value</u>; and

overlaying the geometrical shape over the digital image of the object surface to indicate the location of the energy zone.

7. (original) The method of claim 6 where the step of forming a geometrical image further comprises the step of:

compensating for parallax between the acquired digital image and an optical axis of the IR optical system.

8. (currently amended) A system for indicating the location of an energy zone on an object surface, with the energy zone being an area on the object surface that is imaged onto an IR detector by the IR optical system included in a non-contact IR thermal measurement device, said system comprising:

means for acquiring a digital image of the object surface;

means for displaying a digital image of the object surface, with the digital image including a part of the object surface not included in the energy zone;

means for measuring the distance to the object surface to obtain a distance value;

means for forming a geometrical shape indicating the portion of the object surface indicating the portion of the object surface included in the energy zone, with the geometrical shape having a dimension determined by the distance value; and

means for overlaying the geometrical shape over the digital image of the object surface to indicate the location of the energy zone.

9. (original) The system of claim 8 where the means for forming a geometrical image further comprises:

means for compensating for parallax between the acquired digital image and an optical axis of the IR optical system.